

ABSTRACT

A human powered drive units each including a pair of a rotatable member having a sprocket and a supporting member having a sprocket, which are arranged up and down, and including a chain extended around the rotatable member and the supporting member, are disposed at left and right sides, respectively. The left and right rotatable members 1, 100 are fixed on a driving shaft 15. A chain ring 6 on which the load is applied is mounted on the driving shaft between upper rotatable member 1 and rotatable member 100. In each of the units, constraining means including a free crank (10 for the right-hand unit, and 1000 for the left-hand unit) and arm (11 for the right-hand unit, and 1100 for the left-hand unit), is provided so as to maintain perpendicularity of a shaft of the pedal relative to the plane in which the chain moves. By the rider kicking the pedal along the closed orbit including a linear orbit portion, the force transmitted to the pedal from the foot of the rider is efficiently converted to a rotational force in a longer period of time, thus increasing the power input.